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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,740

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EXAMINER

MICALI, JOSEPH

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,740	<b>Applicant(s)</b> MASHIMO ET AL.	
	<b>Examiner</b> Joseph V. Micali	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3,7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3,7 and 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 1793

## **DETAILED ACTION**

### ***Status of Application***

The argumentation filed on March 8<sup>th</sup>, 2010 has been entered. Claims 3 and 7-8 remain pending and presented for examination on the merits, as claims 1-2 and 4-6 have previously been cancelled.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 1793

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**4. Claims 3 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent No. 2002-050364 by Kurano, in view of US Patent No. 6,610,435 by Maruyama et al and US Patent Pub. No. 2003/0104262 by Kuroki et al.**

With respect to claim 3, Kurano discloses a fuel cell separator (**title**) comprising:

a separator main body that includes a gas channel, a manifold that penetrates the separator main body in a fuel cell stacking direction, a groove that connects the gas channel to the manifold, and concave portions in the main body (**claim 1 and figures 1-3**);

a plate member that covers an opening of the groove (**claim 1 and figures 2-3**); and

a gasket that is made of an elastic material, prevents gas leakage from the manifold to the outside, and is formed in a region on the surfaces of the separator main body and the plate member, the region surrounding the manifold (**claim 1, paragraphs 0006-0007, 0016, and figures 2-3**).

Kurano is silent with regards to a power generating device interposed between the fuel cell separator and another fuel cell separator, with the power generating device having an electrolyte film and electrode films, as the Kurano disclosure is only drawn to the separator. Furthermore, Kurano is silent with regards to the plate member through holes and the corresponding elastic gasket filling, although Kurano does teach an injection molding process of the gasket and the level difference space of figure 3, which most likely teaches some of the elastic material will fill the notches.

Art Unit: 1793

Maruyama is drawn to a fuel gas with reduced gas leakage. Specifically, Maruyama teaches a fuel cell where a gasket covers a portion of the solid polymer electrolyte membrane with a plurality of separators separating the electrode units; thus, stacking the electrode units and separators to form a fuel cell (**abstract**).

At the time of invention it would have been obvious to a person of ordinary skill in the art to produce the product of Kurano including the addition of a power generating device interposed between separators, in view of the teaching of Maruyama. The suggestion or motivation for doing so would have been to form a fuel cell, or at least units for a fuel cell (**Maruyama, abstract**).

Kuroki is drawn to constituent parts for fuel cells comprising a separator-gasket structure (**abstract**). Specifically, Kuroki discloses the plate member comprising a through hole, with the elastic gasket (rubber) permeating through the through hole and to the other side of the plate (**paragraph 0044 and figure 7**).

At the time of invention it would have been obvious to a person of ordinary skill in the art to produce the modified product of Kurano including a through hole with elastic gasket filling, in view of the teaching of Kuroki. The suggestion or motivation for doing so would have been to use a method of fixing which does not require bonding, as the gasket is fixed through the through hole (**Kuroki, paragraph 0044**).

With respect to claims 7-8, as Kuroki shows the diameter of the through hole being smaller than the portion of the gasket filled outside of the through hole (**figure 7**), such limitations would be covered by the combination of Kuroki with primary reference Kurano.

***Response to Arguments***

**5. Applicant's arguments filed on March 8<sup>th</sup>, 2010 have been fully considered but they are not persuasive.**

With respect to applicant's argumentation, applicant solely argues the limitation regarding the plate member containing a through-hole, on the basis that tertiary reference Kuroki discloses a through-hole in the separator, not plate member. This argumentation is not persuasive for several reasons. Firstly, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant begins by addressing the reference of Maruyama, but does not make any argument against it. Regardless, said reference has not been brought in with respect to the argued limitation, and thus, is not pertinent to the argumentation. Then, applicant argues the Kuroki reference; however, said argumentation is not in context with the combination of primary reference Kurano with tertiary reference Kuroki. Given primary reference Kurano's disclosure of the gasket-plate-separator structure and Kuroki's disclosure of through-holes formed on the basis of containing the elastic gasket filling, the combination would require one having ordinary skill in the art to include through-holes in the plate member, as the structure, given the combination, would not have been held together otherwise. Kuroki discloses the elastic gasket spanning the entire body of the separator plate, and thus, by the aforementioned combination, the through-hole would have to span the entire distance from one opening to another, regardless of the multiple layered structure, which means a through-hole in the plate member.

Art Unit: 1793

***Conclusion***

6. Claims 3 and 7-8 are rejected.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph V. Micali whose telephone number is (571) 270-5906. The examiner can normally be reached on Monday through Friday, 7:30am to 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry A. Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph V Micali/  
Examiner, Art Unit 1793

/J.A. LORENZO/  
Supervisory Patent Examiner, Art Unit  
1793